Defense Information Systems Agency

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Rapid Access Computing Environment (RACE)

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Rapid Access Computing Environment (RACE)

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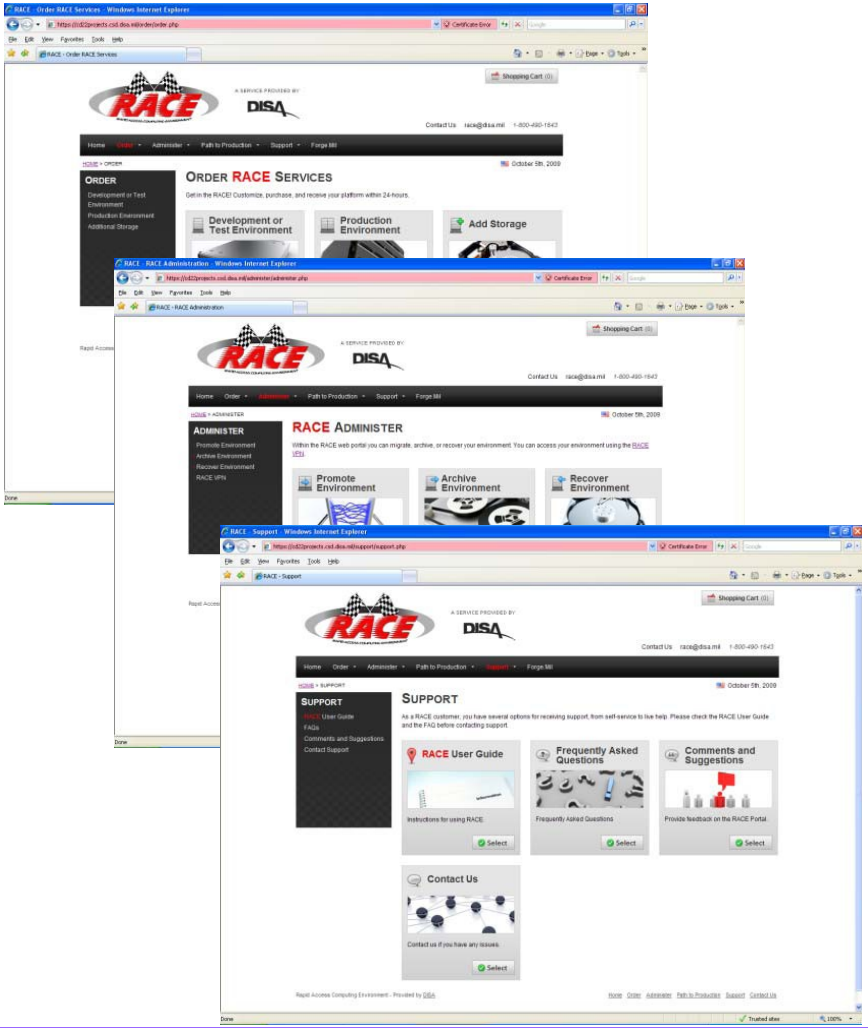
- **RACE supports agile development in a closed community cloud**
  - **Fast access to computing resources for application test and development (T&D)**
  - **More controlled than commercial**
  - **Easier to access than DoD production**
  - **Smooth path to production with security validation**
  - **Meets DoD standards for secure computing**

- **Production cloud ongoing efforts**
  - **Foundation is capacity services contracts**
  - **Tools in place to support Windows and Linux**
  - **Enterprise Portal will provide access to all services**
  - **Orchestration tools will support more mature cloud services**
  - **Location independent capabilities**



Rapid, Standard, Self Service Capabilities

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RACE – What is it?

- **A self-service provisioning system that provides the DoD customers with the ability to acquire a test and development environment in**

  24 Hours!

- **Current service offering – Infrastructure as a Service:**
  - **Variable CPU, Memory, storage and operating environments**
  - **Windows and Red Hat Linux environments**
  - **Optional storage and backup services**

- **Provisioned over the DoD Network**
  - **Access controlled by PKI**
  - **Self-service ~ customer selects configuration from a menu**

er Self-Service ~ Highly Standardized ~ Cost Effective ~ Fa

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RACE Features

Development/Test

- 24-hour automated provisioning
- Increase capacity ~ 1 Business Day
- Month-to-month service
- Reduced cost – No SA support
- Developer/Application STIGs OS
- Customer root access
- Ability to promote from Dev to Test
- Accelerated accreditation
  - Host tenant accreditation model
  - Job Aide for Certification & Accreditation
  - Pre-documented Checklists
- Access to Forge.Mil resources

Path to Production

- Ability to promote from RACE test to DECC production
- Automated provisioning
- Standard CSD service offerings
- Accelerated accreditation
- Host tenant accreditation model
- Pre-established inherited IA controls
- Automated funding for virtual compute resources

Challenges have occurred

RACE Provides Environment and Tools

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RACE Obstacles and Challenges

- **Path to Production**
  - **Test to Production has not met goals**
    - **Process issues**
    - **Security automation & IA validation issues**
    - **Configuration/Standards issues**
- **Governance**
  - **Standards enforcement**
  - **Automated Security and customer IA monitoring**
- **Scope**
  - **Original Mandate**
  - **As Implemented**
  - **Other Requests**

90% of problems can be resolved in the Dev/Test process before promoting to production

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RACE Path to Production

- **Path to Production**
  - **Test to Production has not met goals**
    - **Process issues**
      - **Implement formal staging process & validation checks for all Dev to Test promotions**
    - **Security automation & IA validation issues**
      - **Implement HBSS**
      - **Implement BladeLogic**
      - **Provide RACE IAM and customer with automated patching and security tools**
    - **Configuration/Standards issues**
      - **Enforce OS configuration standards through automation tools, and continuous monitoring**
  - **Optimized Path to Production is #1 driver of RACE users**

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RACE Governance

- **Governance**
  - **Standards enforcement**
    - **Document /publish CSD OS, app., DB configuration standards**
    - **Automate configuration of non-CSD OS images**
    - **Automated staging process to validate image standards & configurations**
    - **Encourage Standard Operating Environment (SOE) software procurement standards**
  - **Automated Security and customer IA monitoring**
    - **Implement security automation & patch tools for customer use**
    - **Implement Continuous Security concept using advanced security automation tools such as CMRS**

RACE Scope

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- **Original Mandate**
  - Development, Test, Production
  - Any supported OS
  - Rapid access to computing resources
- **As Implemented**
  - Test and Development, Standard Windows/Linux only
  - Targeted for DECC Production – Virtual only
  - MAC III only, NIPR/SIPR
- **Other Requests**
  - Production, Platform as a Service, Cloud, COOP
  - Other OS offerings – Solaris, other Linux, Appliances
  - Complex systems
  - Multi-site, MAC I, II, III

RACE Provides a Type Accredited Test and Development Environment

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Way Forward

- **Provide multiple environments**
  - **Standard RACE T&D with Path to Production – “RACE”**
  - **Complex or non-standard T&D – “CS T&D”**
  - **PaaS and cloud services – “DISA Cloud”**
- **Invest in process automation and orchestration**
  - **Demos and pilots in process**
- **Invest in security automation**
  - **STIG and Patching**
  - **Configuration monitoring and management**
  - **Active security monitoring and reporting**
- **Develop, publish and encourage standardization**
  - **Application standards, security standards**

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